

Bay Area Air Quality Management District

**939 Ellis Street
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**Proposed Amendments to
BAAQMD Regulation 9 (Inorganic Gaseous Pollutants)
Rule 10 (Nitrogen Oxide and Carbon Monoxide from Boilers,
Steam Generators and Process Heaters in Petroleum Refineries)**

Staff Report

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
BACKGROUND.....	1
PROPOSED REVISIONS	2
NEW SIP SUBMITTAL	4
ECONOMIC IMPACTS	4
ENVIRONMENTAL IMPACTS.....	5
REGULATORY IMPACTS.....	5
RULE DEVELOPMENT HISTORY	6
COMMENTS AND RESPONSES	6
STATUTORY FINDINGS	7
CONCLUSION.....	7

STAFF REPORT

Proposed Amendments to BAAQMD Regulation 9, Rule 10 (Nitrogen Oxide and Carbon Monoxide from Boilers, Steam Generators and Process Heaters in Petroleum Refineries)

EXECUTIVE SUMMARY

The proposed amendments include several administrative changes to Regulation 9 Rule 10. These changes are in response to US EPA's limited approval/limited disapproval of the rule for inclusion into the California State Implementation Plan (SIP) for the national ozone standard. The purpose of the changes is to rectify the deficiencies noted by EPA, thereby allowing EPA to fully approve the rule into the SIP.

BACKGROUND

The proposed revisions to the District's Regulation 9, Rule 10 are intended to address deficiencies noted by US EPA in their limited approval/limited disapproval of the rule (66 Fed. Reg. 17078, March 29, 2001). If EPA has not fully approved the rule into the California State Implementation Plan (SIP) for the national ozone standard by October 30, 2002, the Bay Area would be subject to sanctions under the federal Clean Air Act.

EPA's partial disapproval is based on its conclusion that the rule does not specify test methods and recordkeeping requirements for determining compliance with the emission limits in the rule.

Regulation 9, Rule 10 contains two different limits for nitrogen oxide (NOx): a stringent Best Available Retrofit Control Technology (BARCT) limit required by state law, and a less stringent Reasonably Available Control Technology (RACT) limit required by federal law. Both of these NOx limits apply to the same set of combustion sources at a refinery. The District submitted the federal NOx limits (Section 9-10-303), and the small unit requirements of Section 9-10-306 to EPA for inclusion in the SIP. The SIP submittal excluded Sections 301, 302, 304, 305, 401, 501, 504, 505, 601, and 602 of the rule.

The District submitted the federal RACT limits rather than the complete rule for several reasons; First, federal law only requires RACT controls, not the more stringent BARCT controls required by state law. Second, state law (Health and Safety Code section 39602) requires that the SIP contain only those provisions necessary under the federal Clean Air Act. Third, state law (Health and Safety Code sections 40920.6 and 39607.5) also requires that emission reduction credits be allowed for compliance with the BARCT limits in the rule, and, because federal credit policy is relatively inflexible, including the BARCT limits in the SIP

would probably prevent the use of the credits that must be allowed under state law. Fourth, preventing the use of credits would also discourage innovative approaches to reducing NOx and would discourage early reduction of NOx.

EPA's partial disapproval is a consequence of two things: (1) the sections containing the RACT standards and the sections containing the test methods and recordkeeping requirements are not cross-referenced, and as a result (2) the SIP submittal did not include test methods and recordkeeping requirements. The rule was submitted to EPA in 1996 because it had been included as a contingency measure in the District's 1994 Redesignation Request and Maintenance Plan for the National Ozone Plan. EPA's potential need to enforce the RACT limits was not foreseen at the time, since affected boilers and other sources were about to become subject to the rule's more stringent BARCT limits.

The proposed amendments are intended to correct the deficiencies cited by EPA and make the rule fully approvable into the SIP. The amendments apply the monitoring and record keeping requirements in the rule to those sources subject to the federal RACT standards in Sections 9-10-303 and 306.

PROPOSED REVISIONS

The proposed amendments to Regulation 9, Rule 10 are:

Section 9-10-302 Interim Emission Limit for Facility

Section 302 will be deleted. This section is for an interim NOx emission standard that became effective on July 1, 2000. The final emission standard in Section 301 becomes effective on July 1, 2002. Because the final standard will supercede the interim standard, Section 302 will be obsolete before the date of adoption of these proposed rule changes. Therefore, Section 302 can be deleted as part of this revision to Regulation 9, Rule 10.

Section 9-10-502 Monitoring

Section 9-10-502 currently contains the monitoring requirements for sources that are subject to the emission standards in Section 9-10-301, 304 and 305. A reference to Section 9-10-303 will be added to this section, so that sources that are subject to Section 9-10-303 will have the same monitoring requirements as other sources. Sources that are subject to the federal NOx limit in Section 9-10-303 are also subject to more stringent NOx limits in Sections 9-10-301 and 304. Since Sections 9-10-301 and 304 are already included in the monitoring requirements, this change does not result in any additional monitoring requirements. The refineries have already submitted monitoring plans for sources subject to Section 9-10-301 and 304. It will not be necessary to submit a new monitoring plan for sources subject to Section 9-10-303 since these source are already covered by the existing monitoring plan.

9-10-504 Records

References to Section 303 and Subsection 306.2 will be added to these record keeping requirements. The section will be divided into 2 subsections: It is necessary to break the monitoring requirements into two subsections because “Small Units” that are subject to Section 9-10-306 are not subject to the same degree of record keeping as other sources.

Subsection 9-10-504.1 includes the existing record keeping requirements for sources that are subject to the emission limits in Section 9-10-301, 304 and 305. A reference to Section 9-10-303 will be added to this subsection, and will become effective on the date of adoption of the proposed amendments. Subsections 9-10-504.1.5, 504.1.6 and 504.1.7 are new requirements to keep a list of affected sources, total NO_x emissions and heat input on a daily basis, start-up and shutdown records. These additional records are necessary to demonstrate compliance with the various emission standards.

Subsection 9-10-504.2 will be added to include tune-up records for “Small Units” that are subject to Section 9-10-306.2.

9-10-505 Reporting Requirements

References to Sections 303 and 306 will be added to the reporting requirements in Section 9-10-505. Per Section 9-10-505.1, the owner/operator will be required to submit a written report to the APCO within 96 hours of a violation of Section 9-10-303 or 306.

9-10-601 Determination of Nitrogen Oxides

A reference to Section 303 will be added to Section 9-10-601. As a result, the owner/operator will have to use a continuous emission monitoring system (CEMS) or an equivalent verification system to show compliance with the federal NO_x limit in Section 9-10-303. This will not impose any additional monitoring burden on the refineries. The sources that are subject to Section 9-10-303 are already subject to the same monitoring requirements, because these sources are also subject to Sections 9-10-301 and 304. In addition, the reference to source test method ST-13B in the District Manual of Procedures will be removed. This is because that source test method has been deleted from the Manual of Procedures.

Minor Grammatical Changes

Staff proposes minor grammatical changes to Section 402 and 505. These changes do not affect the content of the sections. Staff also proposes to remove the word “Interim” from the title of Section 303. When this rule was originally written, the federal NO_x standard in Section 303 was called an *interim* standard because it became effective before the more stringent final standard in Section 301. Since both standards will be in effect as of July 1, 2002, the word *interim* is no longer necessary, and will be deleted.

NEW SIP SUBMITTAL

Upon approval of amendments to the rule, District staff will resubmit the rule through ARB to EPA so that EPA can review and fully approve the rule. As was the case with the earlier SIP submittal, the new submittal will not include the BARCT provisions of the rule or cross references to those provisions. It will, include recordkeeping and testing provisions in Sections 504, 505, and 601, which were not included in the previous submittal and which, at the time of the earlier submittal, did not include cross references to the RACT emission standards in Section 303. With the proposed amendments, these sections will include appropriate cross references, and the submittal of these sections will make the RACT standards fully federally enforceable.

EPA regulations regarding SIP submittals require a public hearing on a SIP submittal (40 C.F.R. §§50.102, 50.104). In the past, EPA has questioned whether the federal hearing requirement for a SIP submittal is met when portions of a rule are submitted, but the entire rule, rather than the part that was submitted, was the subject of a public hearing. Though a hearing on the entire rule is also necessarily a hearing on all parts of the rule, the District hearing will review both the entire rule and that subset of the rule that is proposed to be submitted into the SIP to avoid any uncertainty on this point.

ECONOMIC IMPACTS

Socioeconomic Impacts

Section 40728.5 of the California Health and Safety Code (H&SC) requires districts to assess the socioeconomic impacts of amendments to regulations that, "...will significantly affect air quality or emissions limitations." This regulatory proposal does not fall within the scope of an amendment that significantly affects air quality or emissions limitations. The proposed amendments do not impose any additional emission standards or monitoring requirements on combustion sources at refineries. The amendments clarify that the existing monitoring and record keeping contained in Regulation 9, Rule 10 also applies to sources that are subject to the federal NO_x standard in Section 9-10-303. Sources that are subject to Section 9-10-303 are also subject to Sections 9-10-301 and 304. Since monitoring and record keeping is already required for sources that are subject to Section 9-10-301 and 304, inclusion of Section 9-10-303 sources does not impose monitoring and record keeping requirements on any sources that are not already subject to monitoring and record keeping.

Incremental Costs

Under H&SC 40920.6, the District is required to perform an incremental cost analysis for a proposed rule. To perform this analysis, the District must (1) identify one or more control options achieving the emission reduction objectives for the proposed rule, (2) determine the cost effectiveness for each option, and

(3) calculate the incremental cost effectiveness for each option. To determine incremental costs, the District must “calculate the difference in the dollar costs divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option.” This section of the Health and Safety Code is not applicable to this amendment. There are no identifiable costs associated with this project as there is no change in the regulatory standards or emission limitations.

Section 40727.2 of the Health and Safety Code imposes requirements on the adoption, amendment, or repeal of air district regulations. The law requires a district to identify existing federal and district air pollution control requirements for the equipment or source type affected by the proposed change in district rules. The district must then note any differences between these existing requirements and the requirements imposed by the proposed change. Where the district proposal does not impose a new standard, make an existing standard more stringent, or impose new or more stringent administrative requirements, the district may simply note this fact and avoid the analysis otherwise required by Section 40727.2.

These proposed amendments do not impose any different standards.

ENVIRONMENTAL IMPACTS

The District has determined that these amendments to Regulation 9; Rule 10 are exempt from provisions of the California Environmental Quality Act pursuant to State CEQA Guidelines, Section 15061, subd. (b)(3). The amendments are purely administrative in nature and are intended to correct oversights in the rule. The amendments do not affect emission standards or rates. It can be seen with certainty that this rulemaking project will have no environmental impacts and is therefore exempt under Guidelines Section 15061, subd (b)(3).

REGULATORY IMPACTS

Section 40727.2 of the Health and Safety Code requires an air district, in adopting, amending, or repealing an air district regulation, to identify existing federal and district air pollution control requirements for the equipment or source type affected by the proposed change in district rules. The district must then note any differences between these existing requirements and the requirements imposed by the proposed change. Where the district proposal does not impose a new standard, make an existing standard more stringent, or impose new or more stringent administrative requirements, the district may simply note this fact and avoid the analysis otherwise required by Section 40727.2.

These proposed amendments to Regulation 9, Rule 10 do not impose new or more stringent requirements and are therefore exempt from analysis under the Health and Safety Code requirement.

RULE DEVELOPMENT HISTORY

On May 15, 2002, the District sent a Request for Comments letter to the five petroleum refineries located in the District, the Western States Petroleum Association (WSPA), US EPA Region IX, local environmental and community groups, and the rule development mailing list. The request for comments was also posted on the District website. The District received one comment letter from WSPA. A summary of the WSPA comments and District responses follows. Both comments pertain to Section 9-10-504, Records.

COMMENTS AND RESPONSES

- 1. “The new record keeping requirements of Section 9-10-504 will now include Section 303 (as well as Sections 301, 304 and 305). Section 303 contains a refinery-wide NOx emission limit of 0.20 lb/MBtu which became effective in 1995. The other sections limits do not become effective until July 1, 2002. Although the Section 303 limit is already in effect, there are, presently, no record keeping requirements. The rule revision should state that the new Section 504 record keeping requirements for Section 303 do not become effective until either the adoption date of the rule change or the effective date of Sections 301, 304, and 305 (specifically July 1, 2002), whichever is later.”**

District staff agree that the recordkeeping requirements for the standards in Section 303 do not become effective until these rule revisions are adopted. As proposed, Section 504 will require that records be retained for five years. Section 504 does not require that records that have not been required in the past be created now. Because Section 303 has not been included in the recordkeeping requirements of Section 504 in the past, facilities probably do not have records pertaining to the standards in Section 303. The District does not intend for the recordkeeping requirements for Section 303 to be retroactive. Rather, records for Section 303 will be required only after the date of adoption of these proposed amendments.

- 2. “However, the proposal also calls for records of hourly and daily CO emissions. In nearly all cases, CO is not monitored on an hourly or daily basis. According to the District’s refinery NOx rule monitoring policy, CO emissions are assumed to be well below the 400 ppm limit stated in Section 9-10-305. This assumption is verified by semiannual source tests. Section 504.1.1 should state that records of hourly and daily CO emissions are only required when the CEMS "or equivalent system" parameters produce hourly and daily CO emissions data. A requirement to keep records of the semiannual CO source tests is already included in Section 501.1.4.”**

District staff agree. The proposed hourly and daily CO emission calculation records have been deleted because most sources are not equipped with CO

continuous emission monitors. Source test records are already required by Subsection 9-10-504.1.4.

STATUTORY FINDINGS

Pursuant to Section 40727 of the California Health and Safety Code (H&SC), regulatory amendments must meet findings of necessity, authority, clarity, consistency, non-duplication, and reference. The proposed amendments are:

- Authorized by H&SC Sections 40000, 40001, 40702, 40709 through 40714.5, 40725 through 40728, 40918, and 42300 et seq., 40 CFR Part 51, 42 USC §7410, 42 USC §7503
- Written or displayed so that its meaning can be easily understood by the persons directly affected by it;
- Consistent with other District rules, and not in conflict with state or federal law;
- Non-duplicative of other statutes, rules, or regulations; and
- Are implementing, interpreting, or making specific the provisions of the federal New Source Review program (42 USC §7410 and 7503; 40 CFR Part 51).

CONCLUSION

The proposed amendments have met all legal noticing requirements and have been discussed with all interested parties. Attached to this report are two versions of Regulation 9 Rule 10. One version is the full rule containing all sections. The second version contains only those sections of Regulation 9 Rule 10 that will be re-submitted to EPA for inclusion into the SIP. District staff recommend adoption of amendments to Regulation 9 Rule 10 and approval of the SIP submittal.